

LUKOIL GEYSER A Grade 1 LUKOIL GEYSER A Grade 2

Hydraulic fluid to wellhead and pipeline valves, equipped with hydraulic drives

MEETS REQUIREMENTS

MIL-PRF-5606H

PRODUCT DESCRIPTION

LUKOIL GEYSER A Grade 1 and **LUKOIL GEYSER A Grade 2** are hydraulic fluids with excellent low temperature capabilities. The fluids are manufactured on a highly purified hydrocracking base stock with low pour point and with involvement of additive package providing required performance.

APPLICATION

Fluids **LUKOIL GEYSER A** are intended for use as working body in wellhead and pipeline valves, equipped with hydraulic drives, at low and extra-low ambient temperatures.

Depending on weather conditions it is recommended to use: **LUKOIL GEYSER A Grade 1** at ambient temperatures from minus 70 °C to 40 °C, **LUKOIL GEYSER A Grade 2** at ambient temperatures from minus 70 °C to 50 °C.

LUKOIL GEYSER A meets technical requirements to technical fluid based on a mineral row stock, which is intended for use in wellhead and pipeline valves, equipped with hydraulic drives, in PJSC "GAZPROM".

BENEFITS

- Excellent low-temperature fluidity
- Continuous and reliable operation in a wide temperature range
- High resistance to corrosion and foaming
- Excellent oxidative and thermal stability
- Excellent temperature-viscosity properties

It is possible to use the fluids instead of oils: PMS-20, PMS-20RK, PMS-20-Yugra, Nycolube 4020, Aeroshell Fluid 41, Gidronicol FH-51, AMG-10

The product name in an order:

Hydraulic fluid LUKOIL GEYSER A Grade 1, STO 79345251-085-2015 Hydraulic fluid LUKOIL GEYSER A Grade 2, STO 79345251-085-2015



TYPICAL TEST DATA

| PROPERTY | Test methods | LUKOIL GEYSER A | |
|---|------------------------------------|-----------------------------------|----------------------|
| | | Grade 1 | Grade 2 |
| Appearance | | Homogeneous transparent red fluid | |
| Kinematic viscosity at 40 °C, mm ² /s | GOST 33 / ASTM D445 / GOST R 53708 | 2.85 | 14.11 |
| Kinematic viscosity at 100 °C, mm ² /s | GOST 33 / ASTM D445 / GOST R 53708 | - | 5.42 |
| Kinematic viscosity at -40 °C, mm ² /s | GOST 33 / ASTM D445 / GOST R 53708 | 75.56 | 380.7 |
| Kinematic viscosity at -50 °C, mm ² /s | GOST 33 / ASTM D445 / GOST R 53708 | 197.7 | 981 |
| Acid number, mg KOH/1 g oil | GOST 11362 / ASTM D664 | 0.015 | 0.015 |
| Flash Point, COC, °C | GOST 4333 / ASTM D92 | 108 | 106 |
| Pour Point, °C | GOST 20287 B | -72 | -72 |
| Water content, % | GOST 2477 | nil | nil |
| Mechanical admixtures mass content, % | GOST 6370 | nil | nil |
| Copper plate corrosion (M1 or M2 according GOST 859 at 100 °C during 3 h, group | GOST 2917 / ASTM D130 | pass | pass |
| Cleanliness levels | GOST 17216 and GOST 31247 | 10 | 12 |
| Foaming characteristics: tendency-stability, ml -at 24 °C -at 93,5 °C, -at 24 °C after test at 93,5 °C | ASTM D892 | 30/0 20/0 30/0 | 30/0 20/0 30/0 |
| Tribological properties on four-ball machine: -Wear scar diameter ((20±5) °C, 196 N (20 kgf), 1 h), mm | GOST 9490 | 0.39 | 0.48 |
| Oxidative-thermal stability and corrosiveness at 125°C during 100 h | GOST 20944 | | |
| -kinematic viscosity at 50°C after oxidation | -GOST 33 | 2.38 | 11.54 |
| -acid number after oxidation | -GOST 5985 | 0.05 | 0.05 |
| -weight corrosion index in metal plates testing | -GOST 20944 | 0.0003 | 0.0004 |
| Density at 20°C, kg/m ³ | GOST 3900 / ASTM D4052 | 845.2 | 854.9 |

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved by OOO "LLK-International".

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* This document supersedes all previous versions

